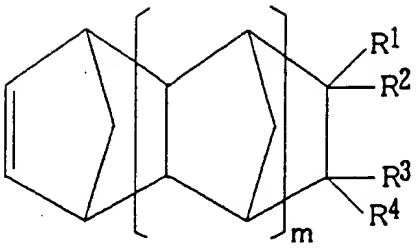
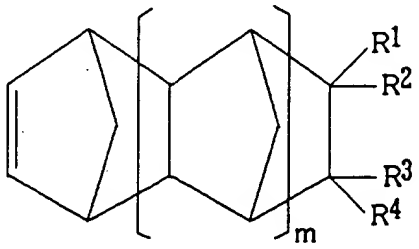


····(1-1)

in which m is an integer of 0 to 2, R^1 to R^4 denote each, independently of each other, an atom or a residue selected from the group consisting of hydrogen atom, halogen atoms and hydrocarbon residues which may have double bond, wherein R^1 to R^4 may be fused together to form a mono- or polycyclic ring which may have double bond or wherein an alkylidene radical may be formed from the pair of R^1 and R^2 or R^3 and R^4 or, further, R^1 and R^3 or R^2 and R^4 may be fused together so as to form a double bond, with the proviso that at least one of R^1 to R^4 stands for an unsaturated hydrocarbon residue having at least one double bond, in case the mono- or polycyclic ring formed from R^1 to R^4 by being fused together has no double bond, in case the pair of R^1 and R^2 or R^3 and R^4 does not form an alkylidene radical and in case R^1 and R^3 or R^2 and R^4 are not fused together to form an endocyclic double bond.

18. (New) The random copolymer as claimed in claim 2, wherein the non-conjugated cyclic polyene (A2) is that represented by the formula (1-1) given below:



····(1-1)

in which m is an integer of 0 to 2, R^1 to R^4 denote each, independently of each other, an atom or a residue selected from the group consisting of hydrogen atom, halogen atoms and hydrocarbon residues which may have double bond, wherein R^1 to R^4 may be fused together to form a mono- or polycyclic ring which may have double bond or wherein an alkylidene radical may be formed from the pair of R^1 and R^2 or R^3 and R^4 or, further, R^1 and R^3 or R^2 and R^4 may be fused together so as to form a double bond, with the proviso that at least one of R^1 to R^4 stands for an unsaturated hydrocarbon residue having at least one double bond, in case the mono- or polycyclic ring formed from R^1 to R^4 by being fused together has no double bond, in case the pair of R^1 and R^2 or R^3 and R^4 does not form an alkylidene radical and in case R^1 and R^3 or R^2 and R^4 are not fused together to form an endocyclic double bond.

19. (New) The random copolymer as claimed in claim 17, wherein the structural unit(s) originated from one or more α-olefins (A1) comprise at least a structural unit originated from ethylene in which the mole ratio of (the structural unit originated from ethylene) versus (the structural unit(s) originated from other α-olefin(s) having 3 or more carbon atoms) is in the range of from 100/0 to 1/99.

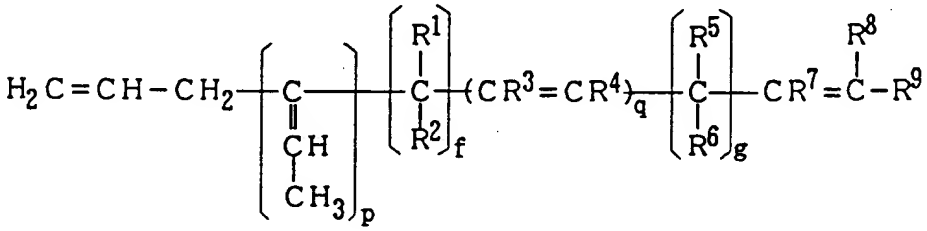
20. (New) The random copolymer as claimed in claim 18, wherein the structural unit(s) originated from one or more α-olefins (A1) comprise at least a structural unit originated from ethylene in which the mole ratio of (the structural unit

originated from ethylene) versus (the structural unit(s) originated from other α-olefin(s) having 3 or more carbon atoms) is in the range of from 100/0 to 1/99.

21. (New) The random copolymer as claimed in claim 17, wherein the structural unit(s) originated from one or more α-olefins (A1) comprise at least a structural unit originated from ethylene in which the mole ratio of (the structural unit originated from ethylene) versus (the structural unit(s) originated from other α-olefin(s) having 3 or more carbon atoms) is in the range of from 100/0 to 50/50.

22. (New) The random copolymer as claimed in claim 18, wherein the structural unit(s) originated from one or more α-olefins (A1) comprise at least a structural unit originated from ethylene in which the mole ratio of (the structural unit originated from ethylene) versus (the structural unit(s) originated from other α-olefin(s) having 3 or more carbon atoms) is in the range of from 100/0 to 50/50.

23. (New) The random copolymer as claimed in claim 2, wherein the non-conjugated linear polyene (A3) is represented by the formula (2-1) given below:

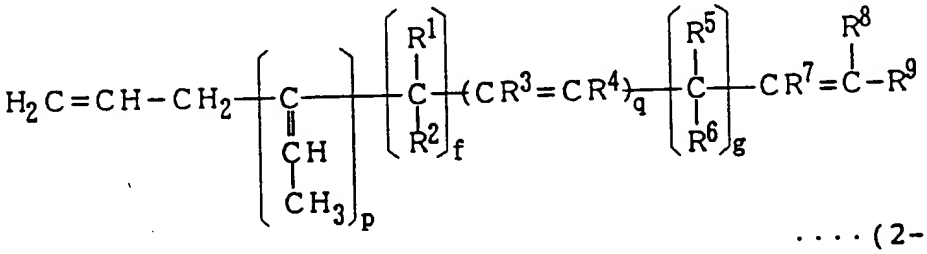


....(2-1)

in which p and q is zero or 1 with the proviso that p and q are

not zero simultaneously, f is an integer of zero to 5 with the proviso that f is not zero when both p and q are 1, g is an integer of 1 to 6, R^1, R^2, R^3, R^4, R^5, R^6 and R^7 denote each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms, R^8 denotes an alkyl group having 1-3 carbon atoms and R^9 denotes hydrogen atom, an alkyl group having 1-3 carbon atoms or a group represented by $-(CH_2)n-CR^{10}=C(R^{11})R^{12}$ in which n is an integer of 1 to 5, R^{10} and R^{11} represent each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms and R^{12} represents an alkyl group having 1-3 carbon atoms, with the proviso that R^9 is hydrogen atom or an alkyl group having 1-3 carbon atoms when both p and q are 1.

24. (New) The random copolymer as claimed in claim 18, wherein the non-conjugated linear polyene (A3) is represented by the formula (2-1) given below:

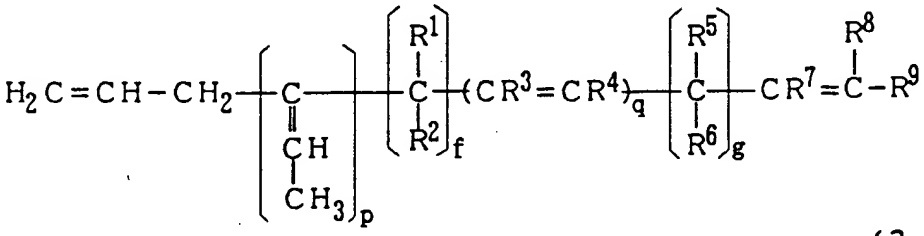


....(2-1)

in which p and q is zero or 1 with the proviso that p and q are not zero simultaneously, f is an integer of zero to 5 with the proviso that f is not zero when both p and q are 1, g is an integer of 1 to 6, R^1, R^2, R^3, R^4, R^5, R^6 and R^7 denote each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms, R^8 denotes an alkyl group having 1-3

carbon atoms and R^9 denotes hydrogen atom, an alkyl group having 1-3 carbon atoms or a group represented by $-(CH_2)n-CR^{10}=C(R^{11})R^{12}$ in which n is an integer of 1 to 5, R^{10} and R^{11} represent each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms and R^{12} represents an alkyl group having 1-3 carbon atoms, with the proviso that R^9 is hydrogen atom or an alkyl group having 1-3 carbon atoms when both p and q are 1.

25. (New) The random copolymer as claimed in claim 20, wherein the non-conjugated linear polyene (A3) is represented by the formula (2-1) given below:

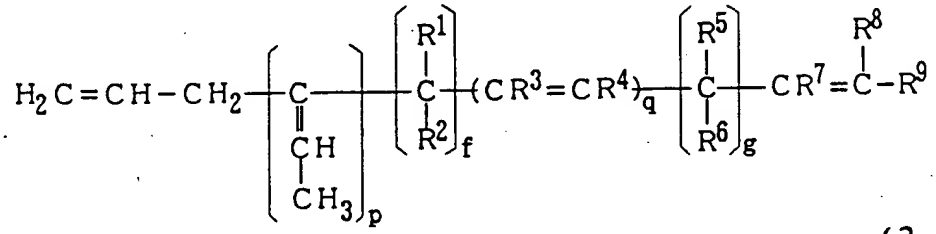


....(2-1)

in which p and q is zero or 1 with the proviso that p and q are not zero simultaneously, f is an integer of zero to 5 with the proviso that f is not zero when both p and q are 1, g is an integer of 1 to 6, R^1, R^2, R^3, R^4, R^5, R^6 and R^7 denote each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms, R^8 denotes an alkyl group having 1-3 carbon atoms and R^9 denotes hydrogen atom, an alkyl group having 1-3 carbon atoms or a group represented by $-(CH_2)n-CR^{10}=C(R^{11})R^{12}$ in which n is an integer of 1 to 5, R^{10} and R^{11} represent each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms and R^{12} represents an alkyl group having

1-3 carbon atoms, with the proviso that R^9 is hydrogen atom or an alkyl group having 1-3 carbon atoms when both p and q are 1.

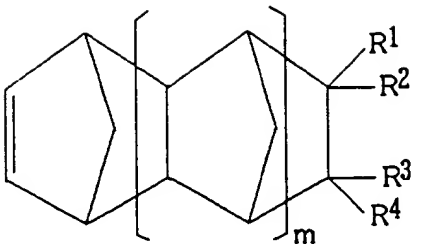
26. (New) The random copolymer as claimed in claim 22, wherein the non-conjugated linear polyene (A3) is represented by the formula (2-1) given below:



....(2-1)

in which p and q is zero or 1 with the proviso that p and q are not zero simultaneously, f is an integer of zero to 5 with the proviso that f is not zero when both p and q are 1, g is an integer of 1 to 6, R^1, R^2, R^3, R^4, R^5, R^6 and R^7 denote each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms, R^8 denotes an alkyl group having 1-3 carbon atoms and R^9 denotes hydrogen atom, an alkyl group having 1-3 carbon atoms or a group represented by $-(CH_2)n-CR^{10}=C(R^{11})R^{12}$ in which n is an integer of 1 to 5, R^{10} and R^{11} represent each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms and R^{12} represents an alkyl group having 1-3 carbon atoms, with the proviso that R^9 is hydrogen atom or an alkyl group having 1-3 carbon atoms when both p and q are 1.

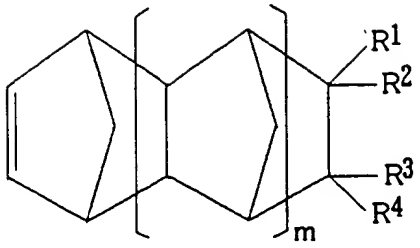
27. (New) The rubber composition as claimed in claim 7, wherein the non-conjugated cyclic polyene (A2) is that represented by the formula (1-1) given below:



....(1-1)

in which m is an integer of 0 to 2, R^1 to R^4 denote each, independently of each other, an atom or a residue selected from the group consisting of hydrogen atom, halogen atoms and hydrocarbon residues which may have double bond, wherein R^1 to R^4 may be fused together to form a mono- or polycyclic ring which may have double bond or wherein an alkylidene radical may be formed from the pair of R^1 and R^2 or R^3 and R^4 or, further, R^1 and R^3 or R^2 and R^4 may be fused together so as to form a double bond, with the proviso that at least one of R^1 to R^4 stands for an unsaturated hydrocarbon residue having at least one double bond, in case the mono- or polycyclic ring formed from R^1 to R^4 by being fused together has no double bond, in case the pair of R^1 and R^2 or R^3 and R^4 does not form an alkylidene radical and in case R^1 and R^3 or R^2 and R^4 are not fused together to form an endocyclic double bond.

28. (New) The rubber composition as claimed in claim 8, wherein the non-conjugated cyclic polyene (A2) is that represented by the formula (1-1) given below:



....(1-1)

in which m is an integer of 0 to 2, R^1 to R^4 denote each, independently of each other, an atom or a residue selected from the group consisting of hydrogen atom, halogen atoms and hydrocarbon residues which may have double bond, wherein R^1 to R^4 may be fused together to form a mono- or polycyclic ring which may have double bond or wherein an alkylidene radical may be formed from the pair of R^1 and R^2 or R^3 and R^4 or, further, R^1 and R^3 or R^2 and R^4 may be fused together so as to form a double bond, with the proviso that at least one of R^1 to R^4 stands for an unsaturated hydrocarbon residue having at least one double bond, in case the mono- or polycyclic ring formed from R^1 to R^4 by being fused together has no double bond, in case the pair of R^1 and R^2 or R^3 and R^4 does not form an alkylidene radical and in case R^1 and R^3 or R^2 and R^4 are not fused together to form an endocyclic double bond.

29. (New) The rubber composition as claimed in claim 27, wherein the structural unit(s) originated from one or more α-olefins (A1) in the random copolymer based on non-conjugated cyclic polyene comprise at least a structural unit originated from ethylene, wherein the mole ratio of (the structural unit originated from ethylene) versus (the structural unit(s) originated from other α-olefin(s) having 3 or more carbon atoms)

is in the range of from 100/0 to 1/99.

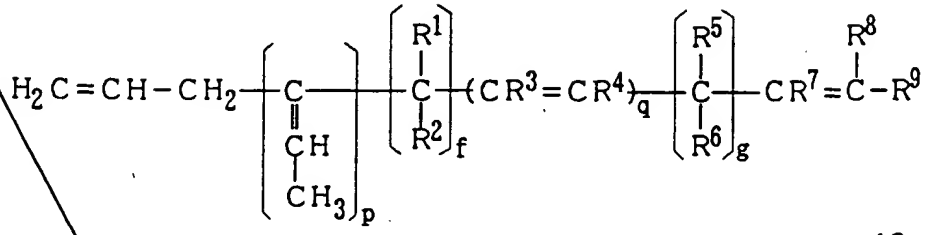
30. (New) The rubber composition as claimed in claim 28, wherein the structural unit(s) originated from one or more α-olefins (A1) in the random copolymer based on non-conjugated cyclic polyene comprise at least a structural unit originated from ethylene, wherein the mole ratio of (the structural unit originated from ethylene) versus (the structural unit(s) originated from other α-olefin(s) having 3 or more carbon atoms) is in the range of from 100/0 to 1/99.

31. (New) The rubber composition as claimed in claim 27, wherein the structural unit(s) originated from one or more α-olefins (A1) in the random copolymer based on non-conjugated cyclic polyene comprise at least a structural unit originated from ethylene, wherein the mole ratio of (the structural unit originated from ethylene) versus (the structural unit(s) originated from other α-olefin(s) having 3 or more carbon atoms) is in the range of from 100/0 to 50/50.

32. (New) The rubber composition as claimed in claim 28, wherein the structural unit(s) originated from one or more α-olefins (A1) in the random copolymer based on non-conjugated cyclic polyene comprise at least a structural unit originated from ethylene, wherein the mole ratio of (the structural unit originated from ethylene) versus (the structural unit(s) originated from other α-olefin(s) having 3 or more carbon atoms) is in the range of from 100/0 to 50/50.

33. (New) The random copolymer as claimed in claim 8,

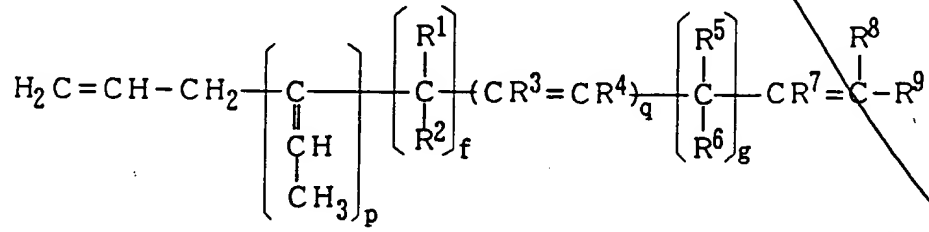
wherein the non-conjugated linear polyene (A3) is represented by the formula (2-1) given below:



....(2-1)

in which p and q is zero or 1 with the proviso that p and q are not zero simultaneously, f is an integer of zero to 5 with the proviso that f is not zero when both p and q are 1, g is an integer of 1 to 6, R^1, R^2, R^3, R^4, R^5, R^6 and R^7 denote each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms, R^8 denotes an alkyl group having 1-3 carbon atoms and R^9 denotes hydrogen atom, an alkyl group having 1-3 carbon atoms or a group represented by $-(CH_2)n-CR^{10}=C(R^{11})R^{12}$ in which n is an integer of 1 to 5, R^{10} and R^{11} represent each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms and R^{12} represents an alkyl group having 1-3 carbon atoms, with the proviso that R^9 is hydrogen atom or an alkyl group having 1-3 carbon atoms when both p and q are 1.

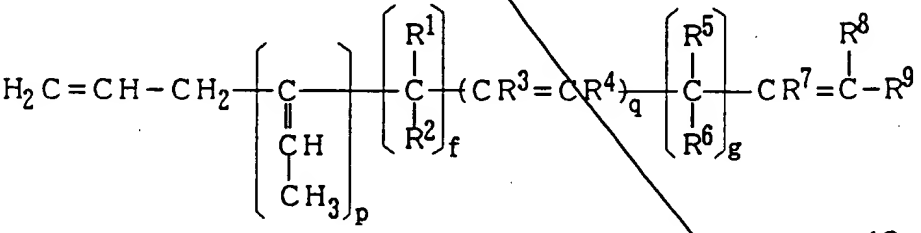
34. (New) The random copolymer as claimed in claim 28, wherein the non-conjugated linear polyene (A3) is represented by the formula (2-1) given below:



....(2-1)

in which p and q is zero or 1 with the proviso that p and q are not zero simultaneously, f is an integer of zero to 5 with the proviso that f is not zero when both p and q are 1, g is an integer of 1 to 6, R^1, R^2, R^3, R^4, R^5, R^6 and R^7 denote each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms, R^8 denotes an alkyl group having 1-3 carbon atoms and R^9 denotes hydrogen atom, an alkyl group having 1-3 carbon atoms or a group represented by $-(CH_2)n-CR^{10}=C(R^{11})R^{12}$ in which n is an integer of 1 to 5, R^{10} and R^{11} represent each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms and R^{12} represents an alkyl group having 1-3 carbon atoms, with the proviso that R^9 is hydrogen atom or an alkyl group having 1-3 carbon atoms when both p and q are 1.

35. (New) The random copolymer as claimed in claim 30, wherein the non-conjugated linear polyene (A3) is represented by the formula (2-1) given below:

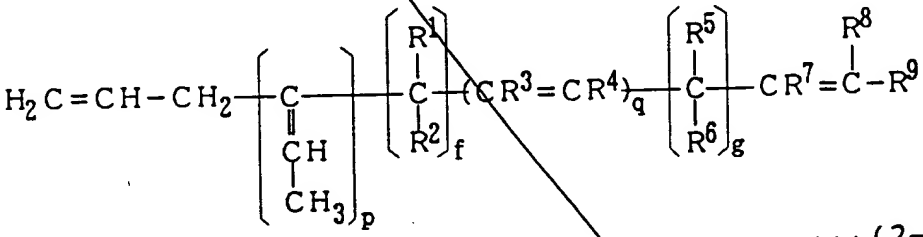


....(2-1)

in which p and q is zero or 1 with the proviso that p and q are not zero simultaneously, f is an integer of zero to 5 with the proviso that f is not zero when both p and q are 1, g is an

integer of 1 to 6, R^1, R^2, R^3, R^4, R^5, R^6 and R^7 denote each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms, R^8 denotes an alkyl group having 1-3 carbon atoms and R^9 denotes hydrogen atom, an alkyl group having 1-3 carbon atoms or a group represented by $-(CH_2)n-CR^{10}=C(R^{11})R^{12}$ in which n is an integer of 1 to 5, R^{10} and R^{11} represent each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms and R^{12} represents an alkyl group having 1-3 carbon atoms, with the proviso that R^9 is hydrogen atom or an alkyl group having 1-3 carbon atoms when both p and q are 1.

36. (New) The random copolymer as claimed in claim 32, wherein the non-conjugated linear polyene (A3) is represented by the formula (2-1) given below:



....(2-1)

in which p and q is zero or 1 with the proviso that p and q are not zero simultaneously, f is an integer of zero to 5 with the proviso that f is not zero when both p and q are 1, g is an integer of 1 to 6, R^1, R^2, R^3, R^4, R^5, R^6 and R^7 denote each, independently of each other, hydrogen atom or an alkyl group having 1-3 carbon atoms, R^8 denotes an alkyl group having 1-3 carbon atoms and R^9 denotes hydrogen atom, an alkyl group having 1-3 carbon atoms or a group represented by $-(CH_2)n-CR^{10}=C(R^{11})R^{12}$